



UNITED STATES PATENT AND TRADEMARK OFFICE

A

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/790,781	03/03/2004	Byoung Yull Yang	1594.1334	3217
21171	7590	03/09/2005	EXAMINER	
STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			LU, JIPING	
			ART UNIT	PAPER NUMBER
			3749	

DATE MAILED: 03/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

58

Office Action Summary	Application No. 10/790,781	Applicant(s) YANG ET AL.	
	Examiner Jiping Lu	Art Unit 3749	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14, 16-29 and 31-35 is/are pending in the application.
- 4a) Of the above claim(s) 1-7 and 31-35 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8-14 and 16-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-7 and 31-35 are withdrawn. Claims 15 and 30 are canceled. Claims 8-14 and 16-29 are pending.

Claim Rejections - 35 USC § 112

2. Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 9 calls for two ducts to supply air to the clothes chamber at two different pressures. However, according to specification, the air from both ducts 112, 302 is supplied from a single air source 218. It is not seen how the pressure could be different between two ducts.

Claim Objections

3. Claims 16-29 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 16 depends on a canceled claim 15.
4. Claim 23 is objected to because of the following informalities: it is improper to claim a sensor which actually is four different sensors. It is suggested that applicant to amend the claims 22-23 to change "sensor" to --sensor unit--. Appropriate correction is required.

Claim Rejections - 35 USC § 103

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hachiman et al. (Japanese patent publication No. 2002-85898) in view of Taylor et al. (U. s. pat. 6,312,507) or Sun et al. (U. S. Pat. 6,447,731).

Hachiman et al. show a clothes dryer with accommodating chamber 6, a duct (not numbered, between 2 and 6) to supply heated air into the chamber 6, a duct (not numbered, between 3 and 6) for supply ozone into the chamber 6, a chamber heater 2, a chamber ozonizer 3, and a controller 4 to control the heater 2 and ozonizer 3. However, Hachiman et al. do not show an ozonizer for automatically supplying ozone into the chamber when the detected odor is greater than an odor reference value. Taylor et al. teach a concept of using a sensor for detecting the odor and activating the ion generator when sensed odor exceeds a predetermined value same as claimed (see abstract). Sun et al. teach a concept of using a sensor 13 for detecting the odor and automatically activate ozone generator 17 based on the detected contamination extent same as claimed. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the clothes dryer of Hachiman et al. with an odor sensor and to automatically control the ozonizer based on the detected odor value as taught by Taylor et al. or Sun et al. in order to improve the cleaning efficiency.

7. Claims 13-14, 16-24 (assuming claim 16 depends on claim 14) are rejected under 35 U.S.C. 103(a) as being unpatentable over Dhaemers (U. S. Pat. 5,546,678) in view of Hachiman

Art Unit: 3749

et al. (Japanese patent publication No. 2002-85898) or Ferris (U. S. Pat. 2,406,494) and Taylor et al. (U. s. pat. 6,312,507) or Sun et al. (U. S. Pat. 6,447,731).

Dhaemers shows a clothes dryer comprising a chamber 608, a humidifier (Col. 3, lines 14-16), a heater 628, a blower 624 for circulating an atmosphere of the chamber, a filter 623 positioned between the chamber 608 and the blower 624, sensor 112, 113 and a control unit 635 which are arranged same as claimed. However, Dhaemers does not show an ozonizer and an ozonizer disposer and a control unit to control the heater and the ozonizer. Dhaemers also does not show a control unit for automatically controlling the ozonizer based on the detected odor. Hachiman et al. shows a dryer with an ozonizer 3 to sanitize clothes, an ozone disposer 5 for disposing ozone and a controller 4 for controlling the heater 2 and ozonizer 3 same as claimed. Ferris teaches a clothes dryer with an ozonizer 21, an ozone disposer 17a for disposing ozone and a controller 31 for controlling the heater 10 and ozonizer 21 same as claimed. Taylor et al. teach a concept of using a sensor for detecting the odor and activating the ion generator when sensed odor exceeds a predetermined value same as claimed (see abstract). Sun et al. teach a concept of using a sensor 13 for detecting the odor and automatically activate ozone generator 17 based on the detected contamination extent same as claimed. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the dryer of Dhaemers with an ozonizer, an ozone disposer and a controller for controlling both ozonizer and heater as taught by Hachiman et al. or Ferris in order to sanitize clothes and to further provide the clothes dryer of Dhaemers with an odor sensor and to automatically control the ozonizer based on the detected odor value as taught by Taylor et al. or Sun et al. in order to improve the cleaning efficiency.

Art Unit: 3749

8. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dhaemers (U. S. Pat. 5,546,678) in view of Hachiman et al. (Japanese patent publication No. 2002-85898) or Ferris (U. S. Pat. 2,406,494) and Taylor et al. (U. s. pat. 6,312,507) or Sun et al. (U. S. Pat. 6,447,731) as applied to claim 16 above, and further in view of Eisen (U. S. Pat. 5,940,988) or Ou (U. s. Pat. 5,555,640).

The clothes dryer of Dhaemers as modified by Hachiman et al. or Ferris and Taylor et al. or Sun et al. as above includes all that is recited in claim 29 except for the door with transparent window. Eisen teaches a clothes dryer with a door 56 having window 60 for viewing the chamber interior from outside same as claimed. Ou('640) teaches a clothes dryer with a door 15 having window 153 for viewing the chamber interior from outside same as claimed. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the clothes dryer of Dhaemers to include a door with windows as taught by Eisen or Ou in order to view the chamber interior from outside.

9. Claims 8-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ou (U. S. Pat. 5,755,040) in view of Hachiman et al. (Japanese patent publication No. 2002-85898) or Ferris (U. S. Pat. 2,406,494)) and Taylor et al. (U. s. pat. 6,312,507) or Sun et al. (U. S. Pat. 6,447,731).

Ou shows a clothes dryer 1 with a clothes chamber 3, a first air duct G, a second air duct D, a chamber air heater 21, a plurality of vents 161, a door 15 with window which are arranged in the same manner as the broad claims. However, Ou does not show an ozonizer and a control unit to control the heater and the ozonizer. Ou also does not show a control unit for automatically controlling the ozonizer based on the detected odor. Hachiman et al. shows a dryer with an

Art Unit: 3749

ozonizer 3 to sanitize clothes and a controller 4 for controlling the heater 2 and ozonizer 3 same as claimed. Ferris teaches a clothes dryer with an ozonizer 21 and a controller 31 for controlling the heater 10 and ozonizer 21 same as claimed. Taylor et al. teach a concept of using a sensor for detecting the odor and activating the ion generator when sensed odor exceeds a predetermined value same as claimed (see abstract). Sun et al. teach a concept of using a sensor 13 for detecting the odor and automatically activate ozone generator 17 based on the detected contamination extent same as claimed. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the dryer of Ou with an ozonizer and a controller for controlling both ozonizer and heater as taught by Hachiman et al. or Ferris in order to sanitize clothes and to further provide the clothes dryer of Ou with an odor sensor and to automatically control the ozonizer based on the detected odor value as taught by Taylor et al. or Sun et al. in order to improve the cleaning efficiency.

10. Claims 14, 16-29 (assuming claim 16 depends on claim 14) are rejected under 35 U.S.C. 103(a) as being unpatentable over Ou (U. S. Pat. 5,755,040) in view of Dhaemers (U. S. Pat. 5,546,678) and Hachiman et al. (Japanese patent publication No. 2002-85898) or Ferris (U. S. Pat. 2,406,494)) and Taylor et al. (U. s. pat. 6,312,507) or Sun et al. (U. S. Pat. 6,447,731).

Ou shows a clothes dryer 1 with a clothes chamber 3, a first internal air duct G, a second external air duct 2, a chamber air heater 21, a plurality of vents 161, a door 15 with window which are arranged in the same manner as claimed. However, Ou does not show a humidifier, an ozonizer, an ozone disposer and a control unit to control the heater and the ozonizer. Ou also does not show a control unit for automatically controlling the ozonizer based on the detected odor. Dhaemers teaches a clothes dryer with a humidifier for supply moisture to the internal

Art Unit: 3749

chamber same as claimed. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the clothes dryer of Ou with a humidifier as taught by Dhaemers in order to supply moisture to the internal chamber. Hachiman et al. shows a dryer with an ozonizer 3 to sanitize clothes, an ozone disposer 5 for disposing ozone and a controller 4 for controlling the heater 2 and ozonizer 3 same as claimed. Ferris teaches a clothes dryer with an ozonizer 21, an ozone disposer 17a for disposing ozone and a controller 31 for controlling the heater 10 and ozonizer 21 same as claimed. Taylor et al. teach a concept of using a sensor for detecting the odor and activating the ion generator when sensed odor exceeds a predetermined value same as claimed (see abstract). Sun et al. teach a concept of using a sensor 13 for detecting the odor and automatically activate ozone generator 17 based on the detected contamination extent same as claimed. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the dryer of Ou with an ozonizer, an ozone disposer and a controller for controlling both ozonizer and heater as taught by Hachiman et al. or Ferris in order to sanitize clothes and to further provide the clothes dryer of Ou with an odor sensor and to automatically control the ozonizer based on the detected odor value as taught by Taylor et al. or Sun et al. in order to improve the cleaning efficiency.

Response to Arguments

11. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.
12. Applicant's arguments with regard to 112 rejections filed 12/16/2004 have been fully considered but they are not persuasive. Since single blower 218 connected to two air ducts 112

Art Unit: 3749

and 302, therefore, the supplied air pressure in both air ducts will be the same even if the blower blows air at different pressure. There is insufficient support in the disclosure for the blower 218 may comprise a plurality of blowers operating to blow air at different pressures and the ducts may be selectively employed.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

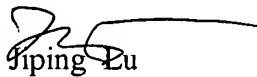
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jiping Lu whose telephone number is 571 272 4878. The examiner can normally be reached on Monday-Friday, 9:00 AM - 5:30 PM.

Art Unit: 3749

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ira Lazarus can be reached on 571 272-4877. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jiping Lu
Primary Examiner
Art Unit 3749

J. L.